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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/004,271 | 01/07/1998 | KAZAUMICHI SHIMADA | Q48630 | 1031 |

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EXAMINER

NGHIEM, MICHAEL P

ART UNIT

PAPER NUMBER

2863

DATE MAILED: 10/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

| | | | |
|-----------------|------------------|--------------|----------------|
| Application No. | 09/004,271 | Applicant(s) | SHIMADA ET AL. |
| Examiner | Michael P Nghiem | Art Unit | 2863 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 15 September 2003.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 18-21,23,27 and 29-32 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 18,20,21,23,27,29,30 and 32 is/are rejected.

7) Claim(s) 19 and 31 is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. 09/628,348.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 27.

4) Interview Summary (PTO-413) Paper No(s). _____

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____

DETAILED ACTION

The Amendment filed on September 15, 2003 has been acknowledged.

Request for Continued Examination

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 15, 2003 has been entered.

Claim Objections

2. Claim 31 is objected to because of the following informalities:

- line 6, after "including" should replace ";" with -- : --.
- line 7, should delete "wherein".

Appropriate correction is required.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted

by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 20, 21, 23, 27, and 29-32 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 of U.S. Patent No. 6,019,465 (Shinada et al.). Although the conflicting claims are not identical, they are not patentably distinct from each other because it would have been obvious to provide the claimed ink cartridge (claims 1-21) of Shinada et al. with a plurality of ink chambers for the purpose of supplying ink of five different colors to five ink supply needles (claims 12, 18).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 18, 20, 21, 23, 27, 29, and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Danzuka et al. (EP 532 302).

Danzuka et al. discloses all the claimed features of the invention including:

- an ink cartridge (9) which is used for an ink jet recording apparatus (Fig. 4), comprising:

- a plurality of ink storage chambers (9-1's, 9-2's) storing ink of five different colors (page 4, lines 14-19), all of the ink storage chambers being collectively integrally formed in the ink cartridge (9-1's, 9-2's are integrated in 9, page 4, lines 16-19);

- different chambers of the five different colors are adjacent to each other (e.g. 9-1C, 9-2C);

- the ink storage chambers store light cyan ink, deep cyan ink, light magenta ink, deep magenta ink and yellow ink (page 4, lines 16-19);

- each ink storage chamber has an ink supply port (ports between heads and reservoirs, Fig. 4), and all ink supply ports are aligned on one straight line (since the reservoirs 9-1's and 9-2's are identical and aligned in a straight line, Fig. 4, heads 9-1's and 9-2's are also identical and aligned in a straight line, Fig. 4);

- the yellow ink is stored in the ink storage chamber located at the most end side of the ink storage chambers (Fig. 4);

- the light cyan ink, deep cyan ink, light magenta ink, deep magenta ink and yellow ink are stored in such a manner that similar colors are adjacent to each other (Fig. 4);

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- the ink storage chambers storing the deep cyan ink and light cyan ink are adjacent and the ink storage chambers storing the deep magenta ink and the light magenta ink are adjacent (Fig. 4);

- the ink storage chambers are arranged in an order of storing the light cyan ink, deep cyan ink, light magenta ink, deep magenta ink and yellow ink in a horizontal direction (Fig. 4);

- all of said ink supply ports are arranged in one horizontal plain (since the reservoirs and heads are arranged in one horizontal plain, Fig. 4);

- a first chamber (9-1C) of said ink storage chambers storing a light cyan ink (Fig. 4), a second chamber (9-2C) of said ink storage chambers storing a deep cyan ink (Fig. 4), a third chamber (9-1M) of said ink storage chambers storing a light magenta ink (Fig. 4), a fourth chamber (9-2M) of said ink storage chambers storing a deep magenta ink (Fig. 4) and a fifth chamber (9-1Y, 9-2Y) of said ink storage chambers storing a yellow ink (Fig. 4);

- the ink storage chambers are integrally formed in the ink cartridge (all the reservoirs 9-1's, 9-2's are part of 9, page 4, lines 16-18).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Danzuka et al. in view of Sakurada et al. (US 4,672,432).

Danzuka et al. discloses all the claimed features of the invention except that all of said ink supply ports are disposed at a bottom of said ink cartridge when said ink cartridge is positioned within the ink jet recording apparatus.

Nevertheless, Sakurada et al. discloses all of ink supply ports (ports connected to 53's) are disposed at a bottom of an ink cartridge (54) when said ink cartridge is positioned within the ink jet recording apparatus (column 3, lines 24-25, Fig. 2) for the purpose of sufficiently consuming and supplying ink to the printhead (51).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to position the ink supply ports of Danzuka et al. such that they are disposed at a bottom of an ink cartridge as disclosed by Sakurada et al. for the purpose of sufficiently consuming and supplying ink to the printhead.

Allowable Subject Matter

6. Claims 19 and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reasons For Allowance

7. The combination as claimed wherein the partitioning walls are formed so that a thickness of the partitioning walls increases along the direction for ink supply ports of each ink storage chambers (claim 19) or a plurality of ink supply needles for supplying the ink to the recording head, adjacent ones of said ink supply needles being arranged to have height difference therebetween (claim 31) is not disclosed, suggested, or made obvious by the prior art of record.

Response to Arguments

8. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

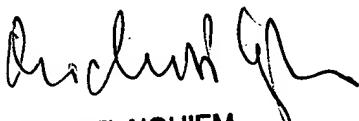
9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Dunn (US 5,103,246) discloses a four-chamber ink cartridge (Fig. 1).

Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (703) 306-3445. The examiner can normally be reached on M-H from 6:30AM – 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached at (703) 308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


MICHAEL NGHIEM
PRIMARY EXAMINER
Michael Nghiem

October 1, 2003